

5.99 Large-Scale, Ground-Mounted Solar Photovoltaic Installations

5.99.1 Purpose

The purpose of this bylaw is to promote the creation of new large-scale ground-mounted solar photovoltaic installations by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such installations that address public safety, minimize impacts on scenic, natural and historic resources and to provide adequate financial assurance for the eventual decommissioning of such installations.

The provisions set forth in this section shall apply to the construction, operation, and/or repair of large-scale ground-mounted solar photovoltaic installations.

- 5.99.1.a Site Plan Review Authority: For purposes of this bylaw, **Special Permit Granting** and Site Plan Review Authority refers to the Granby Planning Board.
- 5.99.1.b Zoning Enforcement Authority: For purposes of this bylaw, Zoning Enforcement Authority refers to the Granby Building Inspector.
- 5.99.1.c **The initial term of any special permit for large-scale ground-mounted solar photovoltaic installations will be 20 years, or such other time as determined by the Planning Board. The permit may be extended for up to two five year terms upon inspection of said facility. Any further extension shall require a new application.**

5.99.2 Applicability

This section applies to large-scale ground-mounted solar photovoltaic installations proposed to be constructed after the effective date of this section. This section also pertains to physical modifications that materially alter the type, configuration, or size of these installations or related equipment, throughout the useful life of the system or where alterations may impact abutters.

5.99.3 General Siting Standards

5.99.3.a Lot Requirements

Large-Scale Ground-Mounted Solar Photovoltaic Installations shall be permitted on parcels larger than two (2) acres located within the Residential Single Family (RS), Industrial (I) & (I-2) Zoning Districts.

5.99.3.b Distance Requirements

All solar photovoltaic installations shall have a minimum distance of 100 feet from the front property line, 50 feet from each side property line and 50 feet from the rear property line. No trees shall be removed outside the limit of work boundary. The Planning Board may allow a lesser setback along a property line where, in its judgment, the proposed facility is not likely to negatively affect an existing or permitted land use on the abutting property. The Planning Board may require a greater setback along a property line where, in its judgement, the proposed facility is likely to negatively affect an existing or permitted land use on the abutting property.

- 5.99.3.c All appurtenant structures shall abide by setbacks as stated within Section III – Use Regulations, **Section 3.2. Dimensional and Density Regulations.**

5.99.4 General Requirements for all Large-Scale Solar Power Generation Installations

The following requirements are common to all solar photovoltaic installations to be sited in designated locations.

- 5.99.4.a Compliance with Laws, Ordinances and Regulations

The construction and operation of all large scale solar photovoltaic installations shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, electrical, and communications requirements. All buildings and fixtures forming part of a solar photovoltaic installation shall be constructed in accordance with the State Building Code.

- 5.99.4.b Building Permit and Building Inspection

No large-scale photovoltaic installation shall be constructed, installed or modified as provided in this section without first obtaining a building permit.

- 5.99.4.c Fees

The application for a building permit for a large scale solar photovoltaic installation must be accompanied by the fee required for a building permit.

5.99.5 Site Plan Review

Ground-mounted large scale solar photovoltaic installations with 250 kW or larger of rated nameplate capacity shall undergo site plan review by the Site Plan Review Authority prior to construction, installation or modification as provided in this section.

- 5.99.5.a General

All plans and maps shall be prepared, stamped and signed by a Professional Engineer licensed to practice in Massachusetts.

- 5.99.5.b Required Documents

Pursuant to the site plan review process, the project proponent shall provide the following documents:

- (1) A site plan showing:
 - (i) **Property** lines and physical features, including roads, for the project site;
 - (ii) Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures;
 - (iii) Blueprints or drawings of the solar photovoltaic installation signed by a Professional Engineer licensed to practice in the Commonwealth of Massachusetts showing the proposed layout of the

- system and any potential shading from nearby structures
- (iv) One- or three- line electrical diagram detailing the solar photovoltaic installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices;
 - (v) Documentation of the major system components to be used, including the PV panels, mounting system, and inverter;
 - (vi) Name, address, and contact information for proposed system installer;
 - (vii) Name, address, phone number and signature of the project proponent, as well as all co- proponents or property owners, if any;
 - (viii) The name, contact information and signature of any agents representing the project proponents; and
- (2) Documentation of actual or prospective access and control of the project site (see also Section 5.99.6)
 - (3) An operation and maintenance plan (see also Section 5.99.7)
 - (4) Zoning district designation for the parcel(s) of land comprising the project site (submission of a copy of a zoning map with the parcel(s) identified is suitable for this purpose);
 - (5) Proof of liability insurance, and
 - (6) Description of financial surety that satisfies Section 5.99.12.c.
 - (7) Any portion of Section 5.99.5 may be waived if in the opinion of the Planning Board, the materials submitted are sufficient for the Planning Board to make a decision.
 - (8) All material modifications to a solar photovoltaic installation made after final approval shall require approval by the Planning Board.

5.99.6 Site Control

The project proponent shall submit documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed solar photovoltaic installation.

5.99.7 Operation & Maintenance Plan

The project proponent shall submit a plan for the operation and maintenance of the large-scale ground- mounted solar photovoltaic installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

5.99.8 Utility Notification

No large-scale ground-mounted solar photovoltaic installation shall be constructed until evidence has been given to the Site Plan Review Authority that the utility company that operates the electrical grid where the installation is to be located has been informed of the solar photovoltaic installation owner or operator's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.

5.99.9 Design Standards

5.99.9.a Lighting

Lighting of solar photovoltaic installations shall be consistent with local,

state and federal law. Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the solar photovoltaic installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

5.99.9.b Signage

Signs on large-scale ground-mounted solar photovoltaic installations shall comply with a municipality's sign bylaw. A sign consistent with a municipality's sign bylaw shall be required to identify the owner and provide a 24-hour emergency contact phone number.

Solar photovoltaic installation shall not be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the solar photovoltaic installation.

5.99.9.c Utility Connections

Reasonable efforts, as determined by the Site Plan Review Authority, shall be made to place all utility connections from the solar photovoltaic installation underground, depending on appropriate soil conditions, shape, and topography of the site and any requirements of the utility provider. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

5.99.9.d Facility Access and Conditions

The large-scale, ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

5.99.9.e Appurtenant Structures

All appurtenant structures to large-scale, ground-mounted solar photovoltaic installations shall be subject to reasonable regulations concerning the bulk and height of structures, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. Whenever reasonable, structures should be shaded from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

5.99.10 Safety and Environmental Standards

5.99.10.a Emergency Services

The large scale solar photovoltaic installation owner or operator shall provide a copy of the project summary, electrical schematic, and site plan to the local fire chief. Upon request the owner or operator shall cooperate with local emergency services in developing an emergency response plan. All means of shutting down the solar photovoltaic installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquires throughout the life of the installation.

5.99.10.b Land Clearing, Soil Erosion and Habitat Impacts

Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the large-scale ground-mounted solar photovoltaic installation or otherwise prescribed by applicable laws, regulations, and bylaws.

5.99.11 Monitoring and Maintenance

5.99.11.a Solar Photovoltaic Installation Conditions

The large-scale ground-mounted solar photovoltaic installation owner or operator shall maintain the facility in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The owner or operator shall be responsible for the cost of maintaining the solar photovoltaic installation and any access road(s), unless accepted as a public way.

5.99.11.b Inspections

The Board shall require periodic inspections of the solar photovoltaic installation after construction and operation, monitoring project to ensure compliance with the terms of the permit approval and related site plan. The required inspections must occur three years after certificate of completion is issued, and then every five years until the project is decommissioned.

5.99.12 Abandonment or Decommissioning

5.99.12.a Removal Requirements

Any large-scale ground-mounted solar photovoltaic installation which has reached the end of its useful life or has been abandoned consistent with Section **5.99.12.b** of this bylaw shall be removed. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the Site Plan Review Authority by certified mail of the proposed date of discontinued operations and plans for removal.

Decommissioning shall consist of:

- (1) Physical removal of all large-scale ground-mounted solar photovoltaic installations, structures, equipment, security barriers and transmission lines from the site.
- (2) Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
- (3) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Site Plan Review Authority may allow the owner or operator to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

5.99.12.b Abandonment

Absent notice of a proposed date of decommissioning or written notice of extenuating circumstances, the solar photovoltaic installation shall be considered abandoned when it fails to operate for more than one year without the written consent of the Site Plan Review Authority. If the owner or operator of the large-scale ground-mounted solar photovoltaic installation fails to remove the installation in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the town may enter the property and physically remove the installation.

Proponents of large-scale ground-mounted solar photovoltaic projects shall provide a form of surety, either through escrow account, bond or otherwise, to cover the cost of removal in the event the town must remove the installation and remediate the landscape, in an amount and form determined to be reasonable by the Site Plan Review Authority, but in no event to exceed more than 125 percent of the cost of removal and compliance with the additional requirements set forth herein, as determined by the project proponent. Such surety will not be required for municipally- or state-owned facilities. The project proponent shall submit a fully inclusive estimate of the costs associated with removal, prepared by a qualified engineer. The amount shall include a mechanism for calculating increased removal costs due to inflation.

3.2 Dimensional and Density Regulations

All permitted uses and uses allowed by special permit shall be in conformity with the dimensional and density regulations set forth in Table 2, Table of Dimensional and Density Regulations.

STRUCTURES OTHER THAN DWELLINGS***									
DISTRICT	RS	RM	GB	I	I-2	VC	FWD	WSP	AP
Minimum Lot Size (sq. ft.)	40,000	40,000	40,000	40,000	40,000	40,000	40,000	60,000	40,000
Minimum Frontage (ft.)	150	150	150	200	200	150	*	150	150
Minimum Front Yard (ft.)	40	40	40	40	40	40	40	40	40
Minimum Side Yard (ft.)	15	30	30**	30**	30**	30**	30	15	15
Minimum Rear Yard (ft.)	20	20	20**	20**	20**	20**	20	20	20
Maximum Height (ft.)	35	35	35	35	35	35	35	35	35
Maximum # of Stories	2	2	2	2	2	2	2	2	2
Maximum Lot Coverage	25%	25%	70%	40%	40%	40%	25%	25%	25%
* Within the overlay district, the dimensional regulations of the underlying district shall remain in effect. ** Where a side or rear yard is adjacent to a residential area such yard shall be a minimum of 50 foot setback. *** Minimum distances from the property line for large-scale ground-mounted solar photovoltaic installations are as follows: Front – 100 feet, Side – 50 feet and Rear – 50 feet (See Section 5.99)									